



REQUEST FOR COUNCIL ACTION

MEETING DATE: June 5, 2023

PREPARED BY: Ken Ashfeld, P.E., Public Works Director/City Engineer

AGENDA ITEM: Biological Water Treatment Pilot Study Proj. No. 23-08
Water Softening Feasibility Study Proj. No. 23-16
Resolution Nos. 23-047 and 23-086

PREVIOUS ACTIONS:

At their February 21, 2023 work session, City Council discussed water supply and water quality issues and directed staff to conduct a feasibility study of options. Staff provided an update on proposed modifications to the existing filtration plant to incorporate biological treatment.

RECOMMENDED COUNCIL ACTION:

Motion to adopt Resolution No. 23-047 establishing Biological Water Treatment Pilot Study Project No. 23-08 approving WSB engineering proposal, and authorizing its execution of acceptance by City Officials.

Motion to adopt Resolution No. 23-086 establishing Water Softening Feasibility Study Project No. 23-16 and ordering feasibility study.

COMMENTS:

This requested action addresses two separate and stand-alone public water supply treatment processes and recommended consultant proposals to conduct appropriate studies. One proposal consists of a study of biological treatment processes for removal of suspended solids with intended immediate implementation if approved by the Department of Health. The other proposal provides for a feasibility study of water softening options.

Biological water treatment

The city owns and operates a public water supply system that provides safe drinking water while adhering to federal and state drinking water standards. To meet these standards the city adds chemicals at the water treatment plant to remove contaminants. In response to significant chemical cost increases last year, staff has been researching ways to reduce costs with no impact to water quality. One option is to go to a biological treatment process. This is an emerging process that relies on microorganisms that are naturally occurring in our groundwater source to complete the treatment process. This process could potentially eliminate the need for sodium permanganate which accounts for approximately 50% of Maple Grove's water treatment chemical budget. The results of the pilot study will be presented to City Council at a future meeting.

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The engineering consulting firm, WSB, has the expertise to complete the pilot study and their proposal to complete this work is attached.

Staff recommends City Council establish Biological Water Treatment Pilot Study Project No. 23-08, approval of WSB's proposal to conduct the pilot study, and authorize its execution of acceptance by City Officials. The cost of the study is \$39,500 to be funded by the water utility fund.

Water softening options

City Council discussed the city's public water supply system at the February 21, 2023 work session and directed staff to conduct a feasibility study to explore options for water softening. Public works staff solicited proposals from numerous consulting firms providing services within the Midwest area and nationally. Staff met with the firms to address any questions they may have regarding the scope of the study but also to determine strengths and weaknesses of the proposing team. They received proposals from seven firms with good to excellent expertise in the area of water supply and treatment. When procuring professional services, cost is a factor but not the only factor. In the opinion of staff, Stantec Consulting Services, Inc. has submitted the best proposal at a cost of \$87,500.

A key element of the feasibility study is to determine the space needs of the water treatment facilities and conduct a master plan of the public works campus with the ultimate goal of efficient use of available land for all needs of city departments.

It is recommended that Stantec prepare the report, and that Council adopt the attached Resolution No. 23-086 establishing the project and ordering the feasibility study.

ATTACHMENTS:

Attachment A: Resolution No. 23-047
Attachment B: Resolution No. 23-086
Attachment C: Proposal from WSB
Attachment D: Proposal from Stantec